



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,669	02/25/2004	Christian Eichrodt	60705-1352	3020
24504 7590 03/17/2008 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994			EXAMINER CORRIELUS, JEAN B	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 03/17/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/786,669

Applicant(s)

EICHRODT ET AL.

Examiner

Jean B. Corielus

Art Unit

2611

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007 and 25 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. The substitute specification filed 1/25/08 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: a clean version of the specification has not been provided.

Drawings

2. The drawings are objected to as follow: fig. 6 and 8 must be amended to clearly show the steps as recited in claim 35. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Art Unit: 2611

3. Applicant's response has overcome the 112 second paragraph rejections of claims 35-43.

Specification

4. The disclosure is objected to because of the following informalities: Please update the status of the co-pending application mentioned in the specification. In addition, page 5 of the specification is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 35, 37, 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata US patent No. 5,822,317 in view of Chang US patent No. 4,434,403.

As per claim 35, Shibata discloses a method comprising monitoring a data signal and generating a shut down signal (first signal) in response to an abnormal condition (a data signal condition) see col. 6, lines 11-13. Note that because of shut down condition, no current is flowing in Shibata accordingly, no DC condition exists. Hence the shut down signal results inherently in preventing any DC flow condition. However, Shibata does not teach the additional limitation of monitoring a clock signal and generating a

signal in response to a clock signal condition to prevent the DC flow condition. Chang teaches monitoring a clock signal and generating a signal in response to a clock signal condition see abstract, lines 1-3. Note that by providing a reset signal any DC condition that may exist in Chang would have been inherently reset or prevented since the circuit would have been re-initialized in response to the reset signal. It would have been obvious to one skill in the art to incorporate such a teaching in Shibata in order to provide Shibata with the capability to detect clock failure so that proper compensation can be provided because clock errors in signal communication if not compensated for may result in data misdetection or even data lost.

As per claim 37, as evidence by Chang see abstract, it is well known in the art to include a comparator in a monitoring device. Given that fact, it would have been obvious to one skill in the art to incorporate a comparator device in the monitoring device because comparator circuits are easier to implement and readily available.

As per claim 38 the first signal is a power down signal see col. 6, lines 11-13.

As per claim 41, the second signal is a reset signal see abstract, lines 1-3.

7. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata US patent No. 5,822,317 in view of Chang US patent No. 4,434,403 and further in view of Kodra US Patent No. 6,226,663.

As applied to claim 35 above, Shibata and Chang teach every feature of the claimed invention but do not explicitly teach the further limitation of a sigma delta modulator configured to provide the data signal. Kodra teaches a sigma delta modulator 12 configured to provide the data signal to monitor 22. Given that fact, it would have

been obvious to one skill in the art to use a sigma delta modulator in Shibata and Chang to produce the data signal so as to take advantage of the inherent property of the sigma delta modulator which makes the probability of encountering a long string of consecutive ones or zeroes during nominal operation to be very small.

8. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata US patent No. 5,822,317 in view of Chang US patent No. 4,434,403 and further in view of Cummiskey US Patent No. 4,353,128.

As applied to claim 35 above, Shibata and Chang teach every feature of the claimed invention but do not explicitly teach the further limitation that the power down (turn-off) signal is generated in response to the data signal having an unchanging value. Cummiskey teaches the further limitation of generating a power down (turn-off) signal in response to the data signal having an unchanging value. Col. 15, lines 39-41. It would have been obvious to one skill in the art to modify Shibata and Chang by turning off the power when a data signal having an unchanging value is received so as to prevent the system from processing invalid data signal and at the same time to minimize power consumption.

9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata US patent No. 5,822,317 in view of Chang US patent No. 4,434,403 further in view of Cummiskey US Patent No. 4,353,128 and further in view of Hicks US Patent No. 4,800,562.

As applied to claim 39 above, Shibata Chang and Cummiskey teach every feature of the claimed invention but do not explicitly teach the further limitation power

down is generated by an asynchronous counter that reaches a maximum value. Hicks teaches further limitation power down is generated by an asynchronous counter that reaches a maximum value see col. 2, lines 42-52. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Shibata Chang and Cummiskey in order to prevent the system from processing invalid data signal and at the same time to minimize power consumption.

10. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata US patent No. 5,822,317 in view of Chang US patent No. 4,434,403 and further in view of Buer US Patent No. 6,188,257.

As per claim 42, as applied to claim 35 above, Shibata Chang teach every feature of the claimed invention but do not explicitly teach the further limitation generating the reset signal in response to a clock signal having a frequency that fails to exceed a predetermined minimum value. Buer teaches the further limitation of generating the reset signal in response to a clock signal having a frequency that fails to exceed a predetermined minimum value. See col. 1, line 65-col. 2, line 2. It would have been obvious to one skill in the art to incorporate such a teaching in Shibata and Chang in order to prevent the system from processing invalid data signal and at the same time to minimize power consumption.

As per claim 43, Shibata, Chang and Buer fail to teach the use of a monostable circuit to generate the reset signal. Note however that it is well known in the art to use a monostable circuit to generate a reset signal. Given that, it would have been obvious to one skill in the art to use a monostable circuit in Shibata, Chang and Buer to generate

the reset signal since such a circuit behaves well with other circuit components and is also easy to implement.

Response to Arguments

11. Applicant's arguments filed 1/25/08, with respect to the drawing, have been fully considered but they are not persuasive. It is alleged that fig. 6 and fig. 8 shows the claimed feature as recited in claim 35. However, it is not clear what elements in fig. 6 and 8 correspond to the respective claim steps, as recited in claim 35. The drawing should be amended to include similar language as recited in the claim.

12. Applicant's arguments with respect to claims 35-43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/

Primary Examiner, Art Unit 2611